

1999-581823/50 C02  
AMERICAN CYANAMID COAMCI 1998-03-06  
\*DE 19909341-A11998-03-06 1998-036491(+1998US-036491) (1999-10-14) C07D  
23/46, A01N 43/54, C07D 471/12, 487/12, 23/832

New pyrimidine derivatives useful as herbicides, especially for selective weed control

C2000-106912

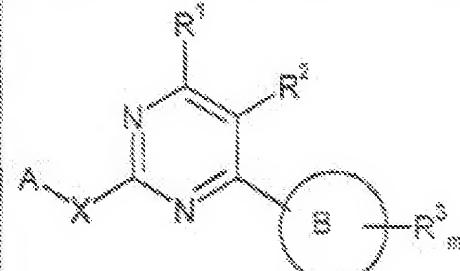
Addl. Data: SCHEIBLICH S, MAIER T, KLEEMAN A,  
BALTRUSCHAT H S  
1999-03-06 1999DE-1099341**NOVELTY**

2-Aryloxy- or 2-arythio-6-aryl-pyrimidine derivatives (I) are new.

**DETAILED DESCRIPTION**

2-Aryloxy- or 2-arythio-6-aryl-pyrimidine derivatives of formula (I) are new.

C07-D12, 14-V2) 2



(I)

A = optionally substituted aryl, optionally substituted 5- or 6-membered heterocaryl or difluorobenzodioxolyl;

B = phenyl or thienyl;

m = 0-5;

R<sup>1</sup> = halogen, CN or optionally substituted alkyl, alkenyl, alkynyl, alkoxyalkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, alkylamino or dialkylamino;R<sup>2</sup> = H, halogen, CN or optionally substituted alkyl, alkoxy, haloalkyl

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or haloalkoxy;

R<sup>3</sup> = halogen, NO<sub>2</sub>, CN, haloalkyl, haloalkoxy, haloalkylthio, SF<sub>6</sub>, or optionally substituted alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, alkylsulfanyl or alkylsulfonyl;

X = O or S.

**ACTIVITY**Herbicidal. In a pre-emergence test, 2-(2-chloro-4-pyridyloxy)-6-methyl-4-(4-trifluoromethylphenyl)-pyrimidine at an application rate of 0.4 kg/ha gave 100% control of poppy (*Papaver rhoeas*) and 91-99% control of chickweed (*Stellaria media*).**MECHANISM OF ACTION**

None given.

**USE**

(I) are herbicides useful for selective weed control, e.g. for pre-emergence weed control in winter wheat, maize, soya, cotton or rice, or post-emergence weed control in winter wheat or maize.

**ADVANTAGE**

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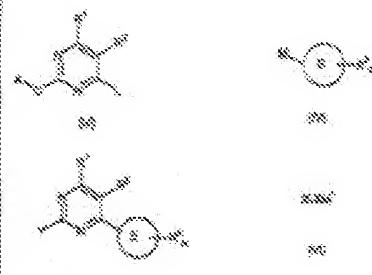
**EXAMPLE**

A mixture of 4-methyl-2-methylsulfonyl-6-(4-trifluoromethylphenyl)-pyrimidine (0.32 g), 3-trifluoromethylphenol (0.18 g), potassium carbonate (0.25 g) and acetonitrile (25 ml) was refluxed for 4 hours, diluted with water and extracted with methyl acetate to give 4-methyl-2-(3-trifluoromethylphenyl)-6-(4-trifluoromethylphenyl)-pyrimidine (0.39 g), m.p. 124-127°C.

**TECHNOLOGY FOCUS**

Organic Chemistry - Preparation: (I) is prepared by:

- (1) reacting a compound of formula (III) with a metal compound of formula (IV) and oxidizing the product when L is hydrogen; or
- (2) reacting a compound of formula (V) with a compound of formula (VI).



L = H or a leaving group;  
M = Li, Mg, Zn, B or Sr;  
Y = a leaving group; and  
M' = H or metal.  
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